National Institute of Environmental Health Sciences

Henipaviruses: Emerging paramyxoviruses associated with fruit bats

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Abstract:

Two related, novel, zoonotic paramyxoviruses have been described recently. Hendra virus was first reported in horses and thence humans in Australia in 1994; Nipah virus was first reported in pigs and thence humans in Malaysia in 1998. Human cases of Nipah virus infection, apparently unassociated with infection in livestock, have been reported in Bangladesh since 2001. Species of fruit bats (genus Pteropus) have been identified as natural hosts of both agents. Anthropogenic changes (habitat loss, hunting) that have impacted the population dynamics of Pteropus species across much of their range are hypothesised to have facilitated emergence. Current strategies for the management of henipaviruses are directed at minimising contact with the natural hosts, monitoring identified intermediate hosts, improving biosecurity on farms, and better disease recognition and diagnosis. Investigation of the emergence and ecology of henipaviruses warrants a broad, cross-disciplinary ecosystem health approach that recognises the critical linkages between human activity, ecological change, and livestock and human health.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia, Australasia

Asian Region/Country: Other Asian Country

Other Asian Country: Malaysia;Bangladesh

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Zoonotic Disease

Zoonotic Disease: Hendra Virus, Nipah Virus

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified